
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
SECTION I: REMINISCENCES	
1. On the Discovery of Precursor Processing <i>Donald F. Steiner</i>	3
2. The Prohormone Theory and the Proprotein Convertases: It Is All About Serendipity <i>Michel Chrétien</i>	13
SECTION II: BIOCHEMISTRY AND CELL BIOLOGY	
3. The Proprotein Convertases, 20 Years Later <i>Nabil G. Seidah</i>	23
4. Insights from Bacterial Subtilases into the Mechanisms of Intramolecular Chaperone-Mediated Activation of Furin <i>Ujwal Shinde and Gary Thomas</i>	59
5. The Novel Role of Cathepsin L for Neuropeptide Production Illustrated by Research Strategies in Chemical Biology with Protease Gene Knockout and Expression <i>Lydiane Funkelstein and Vivian Hook</i>	107
6. In Vitro Assay for Protease Activity of Proprotein Convertase Subtilisin Kexins (PCSKs): An Overall Review of Existing and New Methodologies <i>Ajoy Basak, Andrew Chen, Swapan Majumdar, and Heather Palmer Smith</i>	127
7. Inhibitor Screening of Proprotein Convertases Using Positional Scanning Libraries <i>Iris Lindberg and Jon R. Appel</i>	155
8. Analyses of PCSK9 Post-translational Modifications Using Time-of-Flight Mass Spectrometry <i>Thilina Dewapura and Janice Mayne</i>	167
SECTION III: MOLECULAR BIOLOGY AND GENETICS	
9. The Molecular Biology of Furin-Like Proprotein Convertases in Vascular Remodelling <i>Philipp Stawowy and Kai Kappert</i>	191

10. Identification of the Myosin Heavy Polypeptide 9 as a Downstream Effector of the Proprotein Convertases in the Human Colon Carcinoma HT-29 Cells	207
<i>Nathalie Scamuffa, Peter Metrakos, Fabien Calvo, and Abdel-Majid Khatib</i>	
11. Regulation of 7B2 mRNA Translation: Dissecting the Role of Its 5'-Untranslated Region	217
<i>Haidy Tadros, Gunther Schmidt, Francine Sirois, and Majambu Mbikay</i>	
12. Analysis of Epigenetic Alterations to Proprotein Convertase Genes in Disease . . .	231
<i>YangXin Fu and Mark W. Nachtigal</i>	
13. Genetic and Functional Characterization of PCSK1	247
<i>Hélène Choquet, Pieter Stijnen, and John W.M. Creemers</i>	
SECTION IV: EXPERIMENTAL MODELS	
14. Prohormone Processing in Zebrafish	257
<i>Michael G. Morash, Kelly Soanes, and Younes Anini</i>	
15. Use of Zebrafish and Knockdown Technology to Define Proprotein Convertase Activity	273
<i>Babykumari P. Chitramuthu and Hugh P.J. Bennett</i>	
16. Characterization of Impaired Processing of Neuropeptides in the Brains of Endoprotease Knockout Mice	297
<i>Margery C. Beinfeld</i>	
17. Quantitative Peptidomics of Mice Lacking Peptide-Processing Enzymes	307
<i>Jonathan Wardman and Lloyd D. Fricker</i>	
18. A Proteomic Protocol to Identify Physiological Substrates of Pro-protein Convertases	325
<i>Guiying Nie and Andrew N. Stephens</i>	
19. Neurophenotyping Genetically Modified Mice for Social Behavior	343
<i>Ramona M. Rodriguiz, Jennifer S. Colvin, and William C. Wetsel</i>	
<i>Index</i>	365



<http://www.springer.com/978-1-61779-203-8>

Proprotein Convertases

Mbikay, M.; Seidah, N.G. (Eds.)

2011, XI, 367 p., Hardcover

ISBN: 978-1-61779-203-8

A product of Humana Press